

Frequently Asked Questions: Calculate Median MELD at Transplant (MMaT) around the Donor Hospital and Update Sorting within Liver Allocation

In June 2022, the OPTN will implement changes to liver allocation policy. For liver candidates age 12 and older, many exception scores granted by the National Liver Review Board (NLRB) are indexed to a median score reflecting recent transplants performed near the transplant hospital where the candidate is listed. This index score is called the median MELD at transplant (MMaT).

Prior to June 2022, the basis for the MMaT calculation has been liver transplants performed within the past year at hospitals within a 250 nautical mile (NM) radius of each transplant hospital, excluding certain less common types of transplants as outlined in OPTN policy. [Under the new policy](#), the MMaT calculation will be based on a 150 NM radius surrounding each donor hospital in the country, and that median value will apply to the exception score for any transplant candidate receiving liver offers from that donor hospital.

Candidates with a MELD exception based on MMaT will no longer have a single exception score relative to the transplant program where they are registered. Instead, these candidates will have a MELD score adjustment based on the MMaT of the donor hospital where the match is being run. This means that MELD exception scores may fluctuate based on liver offers from different donor hospitals, and the specific scores will not be known until the match is run.

For candidates younger than age 12, the Pediatric End-stage Liver Disease (PELD) is used to determine medical urgency. The corresponding index score used for exceptions is the median PELD at transplant (MPaT). This is a national score calculated for all transplants performed on candidates younger than age 12, with certain exceptions outlined in OPTN policy. The MPaT calculation is not affected by the new policy, as it draws upon transplants performed nationwide.

Below are answers to common questions regarding the new policy and how it will be applied.

About the policy

- **How does median MELD at transplant (MMaT) around the donor hospital differ from MMaT around the transplant program?**

The main difference with the new policy is that exception candidates' scores will be assigned relative to the MMaT of the donor hospital where the match is being run as opposed to the transplant program at which the candidate is registered. Previously, exception scores were assigned based on the MMaT of transplants performed within 250 NM. Under the new policy, exception scores will be assigned based on the MMaT of transplants performed within 150 NM of the donor hospital where the match is being run. This means that exception scores will change based on the location of the donor hospital.

For example, if the MMaT of a donor hospital is 25, candidates with an exception on a match run for a donor at that hospital with MMaT-3 will have a score equal to 22. For a donor hospital where the MMaT is 30, the same candidates with an exception for MMaT-3 will have a score equal to 27.

- **How will MMaT around the donor hospital be calculated?**

The MMaT for each donor hospital will be based on a cohort of recipients transplanted at programs within 150 NM of the donor hospital over a prior 365-day period. If there are either less than two active liver transplant programs or less than 10 qualifying transplants performed within 150 NM, the circle size will increase in increments of 50 NM until there are at least 2 active programs and 10 qualifying transplants to use within the 365-day cohort.

The calculation excludes recipients transplanted with livers from living donors, DCD donors, or donors from donor hospitals more than 500 NM away. Status 1A and Status 1B recipients are also excluded. MMaT scores for donor hospitals will be updated twice each year.

- **What about Hawaii, Puerto Rico, and Alaska?**

Because there is only one transplant program in Hawaii and Puerto Rico, respectively, two transplant programs do not need to be included in the MMaT cohort. The policy still requires there to be 10 transplants included in the MMaT calculation cohort for each program. If there have not been 10 qualifying transplants in a prior 365-day period for donor hospitals in either Hawaii or Puerto Rico, respectively, the cohort will go back 730 days.

Currently, there is not a transplant program in Alaska, and all donors recovered in Alaska are considered to be based at the Seattle-Tacoma Airport for the purposes of allocation. Similarly, for donors from Alaska, the MMaT will be calculated as if the location of the donor hospital is Seattle-Tacoma Airport.

- **How will the OPTN monitor the impact of the policy change?**

The OPTN is committed to monitoring all policy changes. Monitoring reports will be released approximately 6 months, 1 year, and 2 years after implementation. More detail on the specific monitoring metrics can be found in the [briefing paper](#).

Effects of the new policy

- **Will waiting time calculations change?**

Yes, the waiting time calculation will change. In the previous policy, all liver transplant candidates were sorted (after MELD/PELD score and blood type) within a classification based on time at current MELD or PELD score and higher. However, because exception scores will fluctuate based

on the MMaT of the donor hospital, exception candidates will no longer be able to be sorted based on time at score or higher. Therefore, under the new policy, exception candidates will be sorted based on time since submission of earliest approved exception.

- **How will candidates be sorted?**

The new policy also changes the order in which candidates are sorted within allocation classifications and includes additional pediatric priority. When MELD and PELD score and blood type compatibility are equal, pediatric candidates are sorted ahead of adult candidates. If MELD or PELD score, blood type compatibility, and age (pediatric vs. adult) are equal, candidates with a lab score are sorted ahead of candidates with an exception score. Lab candidates are then sorted based on time at score or higher and exception candidates are sorted based on time since submission of earliest approved exception.

- **Is it possible to know the MMaT scores for individual donor hospitals when requesting an exception?**

The OPTN will soon provide the MMaT values for each donor hospital. When a donor becomes available and a match is run, the donor hospital MMaT score will be displayed within the organ offer information.

- **Why is there a minimum exception score of 15?**

The new policy includes a minimum exception score of 15, which aligns with the national sharing threshold. There could be a donor hospital whose MMaT would be 17. This would mean that exception candidates with an exception for MMaT-3 would be assigned a score of 14, which is below the national sharing threshold. Thus, without that minimum score, a liver would be offered first to all candidates with a MELD/PELD above 15 across the nation before being offered to the majority of exception candidates, some of whom will be listed at transplant hospitals closer to the donor location.

Candidates with an initial HCC exception and first extension, specifically, will continue to have a six-month delay, during which their assigned score will be 6. To address the new circumstance, during that six-month period, HCC candidates will appear on the match run with their calculated MELD score.

- **How will the policy impact pediatric candidates?**

The new policy will not change the median PELD at transplant (MPaT) calculation, which is based on a national cohort. However, it will include some additional priority for pediatric candidates.

In the new sorting order, when MELD/PELD and blood type compatibility are equal, pediatric candidates will be ranked ahead of adult candidates.